

TRAFFIC SPEED REPORT NO.62**DEC., 1957****NO. 33***by**C. Pinnell***Joint
Highway
Research
Project****PURDUE UNIVERSITY
LAFAYETTE INDIANA**

PROGRESS REPORT
TRAFFIC SPEED REPORT NO. 62

TO: K. B. Woods, Director
Joint Highway Research Project
December 18, 1957

FROM: H. L. Michael, Assistant Director
File: 8-3-3
Project C-36-10C

The attached Traffic Speed Report No. 62 has been prepared by Mr. Charles Pinnell, graduate assistant on our staff. Mr. Suwanto Hardjodipuro assisted in the collection of the data.

This progress report is the 1957 summer, semi-annual speed study. The speeds were obtained at the same locations as in previous years and add to the nineteen years of speed data that the Project has collected.

Copies of this report will be distributed as usual to the State Police and to the Office of Traffic Safety. The report is submitted for the record.

Respectfully submitted,

Harold L. Michael
Harold L. Michael, Assistant Director
Joint Highway Research Project

HLM:hgb

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PROGRESS REPORT
TRAFFIC SPEED REPORT NO. 62

by

Charles Pinnell
Graduate Assistant

Joint Highway Research Project
File: 8-3-3
Project C-36-10C

Purdue University
Lafayette, Indiana

December 18, 1957

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TRAFFIC SPEED REPORT NO. 62

This report covers spot speed observations made during August 1957. These data were collected by Suwanto Hardjodipuro and the writer. All observations are for free-moving vehicles on level tangent sections of rural highways. The location of the observation stations are as follows:

1. U.S. 52 - 1.0 miles South of Jct. with
S.R. 26 (Dual Lanes)
2. U.S. 52 - 1.0 miles West of Klondike
(Dual Lanes)
3. U.S. 52 - 2.2 miles Northwest of
Templeton (2 lane)
4. U.S. 31 - 7.2 miles North of Perrysburg
(2 lane)
5. S.R. 25 - 1.0 miles South of Americus
(2 lane)

Previous reports have included observation taken on U.S. 41, 1.0 miles north of Boswell. At the time the observations were made for this report, a bridge was out on U.S. 41 in the vicinity of Boswell and traffic was being detoured over an alternate route. For this reason, no observations were made at this location.

The speed observations for this study were made with an Electronic Radar Speed Meter. The meter was concealed as part of a rural mailbox and the observers concealed themselves as well as local

conditions permitted. It is believed that the observations were taken without influencing the speeds of the vehicles. Before using the meter it was checked for accuracy and calibrated in the speed range of 20 to 100 miles per hour.

A summary of the results of this study as well as the last seven studies is given in Table I. Indiana State law limits the speed of passenger cars and trucks weighing less than 5,000 pounds to 65 miles per hour, while trucks weighing more than 5,000 pounds are limited to 45 miles per hour. For this reason, the truck speeds are divided into three groups, light trucks, heavy trucks and all trucks. Since it is impractical to accurately determine the exact weight of each truck, panel and pickup types are classed as less than 5,000 pounds while dual-tired and semi-trailer types are classed as weighing over 5,00 pounds.

In order to facilitate a comparison between the present and the last previous observations at a given location, the results of the present and previous study are tabulated in Tables II through V. All speed observations were taken at the same locations for this study as for previous studies with the exception that the observations on U.S. 41 near Boswell were omitted.

The average speed for all passenger cars decreased by 1.4 miles per hour since the last study (May 1957) while the average speed for all trucks increased by 0.8 miles per hour. Indiana passenger cars decreased their average speed on two-lane highways by 0.1 miles per hour while their average speed on four-lane highways decreased by 2.4 miles per hour. A decrease of 2.4 miles per hour on two-lane highways

and 3.7 miles per hour on four-lane highways was noted in the average speed of out-of-state passenger cars.

The average speed for light trucks increased 1.5 miles per hour on two-lane highways and 0.2 miles per hour on four-lane highways. For heavy trucks, and increase in average speed of 1.0 miles per hour on two-lane highways and 0.6 miles per hour on four-lanes highways was observed.

When compared with results of a previous survey made a year earlier in August 1957, a slight increase in average speed was indicated. The average speed for all passenger cars on all highways increased by 0.5 miles per hour while the same average for all trucks increased by 0.8 miles per hour during the one year period.

Trend information on the average speed of passenger cars and trucks is shown in Table I and in Figures 6 and 7.



TABLE I

SUMMARY OF SPOT SPEED OBSERVATIONS
ON INDIANA HIGHWAYS

(Free-Moving Vehicles on Level, Tangent Sections)

		Passenger Cars				Trucks		
		Ind Mean	Non-Ind Mean	All Mean	All 85 per	Light Mean	Heavy Mean	All Mean
Two-lane highways	Apr. '54	53.6	56.5	54.8	63.6	44.8	42.9	43.7
	Aug. '54	55.0	56.8	55.7	63.8	49.9	46.0	47.1
	Dec. '54	52.0	54.1	52.8	58.8	48.2	44.6	45.2
	July '55	53.8	55.7	54.5	64.8	46.2	45.5	45.6
	Feb. '56	54.9	58.0	55.9	63.2	47.1	43.2	44.4
	Aug. '56	55.0	56.3	55.5	63.4	50.6	45.5	46.6
	May '57	55.6	59.1	56.9	64.0	50.2	44.8	46.1
	Aug. '57	55.5	56.7	55.9	62.1	51.7	45.8	47.3
Four-lane highways	Apr. '54	56.4	58.8	57.3	66.0	43.7	41.7	42.2
	Aug. '54	55.5	58.2	56.6	65.0	52.1	45.6	47.1
	Dec. '54	54.2	55.7	54.7	60.4	47.1	43.6	44.3
	July '55	54.5	56.6	55.2	63.7	47.5	43.9	44.8
	Feb. '56	58.1	60.1	58.7	65.7	47.8	45.2	45.8
	Aug. '56	57.4	58.8	58.2	66.8	49.6	46.0	47.4
	May '57	59.9	63.6	61.0	69.0	52.2	46.0	47.9
	Aug. '57	57.5	59.9	58.5	64.8	52.0	46.6	47.6
All highways	Apr. '54	54.6	57.3	55.6	64.4	44.5	42.5	43.3
	Aug. '54	55.1	57.3	56.0	64.2	50.5	45.9	47.1
	Dec. '54	52.7	54.3	53.4	59.3	47.8	44.0	44.8
	July '55	54.1	56.6	55.2	64.3	46.9	44.7	45.2
	Feb. '56	56.0	58.6	56.8	63.8	47.3	44.0	44.9
	Aug. '56	55.7	57.3	56.4	64.5	50.2	45.6	46.9
	May '57	57.2	60.3	58.3	66.0	50.9	45.2	46.6
	Aug. '57	56.2	58.3	56.9	63.2	51.8	46.1	47.4

TABLE

II

SPREAD DATA

Station U. S. 52 1.0 Miles South of South Jct. S.R. 28

Surface 24: N.B. - P.C.C. S.B. - Bit. Conc. (Divided Lanes) Weather Clear - Warm
 This Observation Date Aug. 23, 1957 Last Previous Observation (Speed Report No. 61)
 Time 8:50 A.M. - 11:45 A.M. Feb. 19, 1957
 P.M. 2:00 - 5:00 P.M.

PASSENGER CARS				TRUCKS				305555	
OBSERVATION	all		Indiana	Non-Indiana	All	5000 pounds or more	5000 pounds or more	Presect	All
	Last	Present	Last	Present	Last	Present	Present		
No. of Vehicles Obs.	382	397	311	221	176	115	37	78	4
Ave. Speed (m.p.h.)	61.1	59.4	60.7	58.5	60.4	48.7	53.8	46.3	56.0
45 m.p.h.	—	97.2	—	96.4	—	68.7	83.8	61.5	100
50 m.p.h.	94.0	93.2	93.6	91.9	95.8	40.0	70.3	25.6	100
55 m.p.h.	84.3	79.8	83.0	74.2	90.1	20.9	48.6	7.7	75.0
60 m.p.h.	65.4	54.7	62.7	49.8	78.9	7.8	24.3	0	25.0
65 m.p.h.	32.7	19.9	29.6	19.5	46.5	5.2	16.2	0	0
70 m.p.h.	10.5	6.0	9.7	4.1	14.1	3.5	10.8	0	0
75 m.p.h.	2.6	1.3	2.6	1.4	1.1	0	0	0	0
No. of Vehicles Obs.	191	195	158	109	33	57	15	42	4
Ave. Speed (m.p.h.)	60.8	59.8	60.3	59.4	63.2	46.8	48.9	96.1	56
Max. Speed (m.p.h.)	—	—	75	81	77	76	61	59	69
State or Type	—	—	—	—	Ill	—	2PCO	2PU	2S2
Min. Speed (m.p.h.)	—	—	40	46	43	39	26	38	32
State or Type	—	—	—	—	US Govt	—	2P St	2PU	2D
No. of Vehicles Obs.	191	202	153	112	38	90	22	16	39
Ave. Speed (m.p.h.)	61.5	59.0	61.0	57.7	63.3	60.5	57.1	47.2	44.8
Max. Speed (m.p.h.)	—	—	78	75	85	75	72	57	57
State or Type	—	—	—	—	Ohio	—	2 SOP	2PU	231
Min. Speed (m.p.h.)	—	—	30	27	46	46	40	30	31
State or Type	—	—	—	—	Ohio	—	2P St	2 PU	2SOP



TABLE

III

SPEED DATA

Station U.S. 52 1.0 Miles West Of KlondikeSurface 24' Portland Cement Concrete (Divided Lanes)

This Observation

Weather Clear & WarmLast Previous Observation (Speed Report No. 61)Date August 22, 1957Date February 15 & 20, 1957Time 2:30 to 4:40 P.M.Time 2:30 to 4:30 P.M.

PASSENGER CARS										TRUCKS						BUSES					
All					Indiana			Non-Indiana			All			Less than 5000 pounds			5000 pounds or more				
OBSERVATION					Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	
No. of Vehicles Obs.					405	380	303	222	102	158	95	122	48.6	49.9	51.7	45.8	47.9	69	100	6	0
Ave. Speed (m.p.h.)					60.8	57.7	59.7	56.5	63.9	59.3	68.4	80.3	76.9	95.5	65.2	77	16.7	0			
Max. Speed (m.p.h.)					91.1	90.5	89.1	87.8	97.1	94.3	32.6	43.4	50.0	63.6	26.1	39	16.7	0			
Min. Speed (m.p.h.)					79.5	70.8	76.6	64.9	88.2	79.1	9.5	13.3	26.9	27.3	2.9	10	0	0			
No. of Vehicles Obs.					62.5	42.1	56.8	33.8	79.4	53.8	7.4	3.3	26.9	13.6	0	1	0	0			
Ave. Speed (m.p.h.)					30.4	12.4	27.1	8.6	40.2	17.7	2.1	1.6	7.7	9.1	0	0	0	0			
Max. Speed (m.p.h.)					14.3	4.2	11.6	3.6	22.5	5.1	1.1	0	3.8	0	0	0	0	0	0	0	0
Min. Speed (m.p.h.)					3.2	1.1	1.0	0.9	9.8	1.3	0	0	0	0	0	0	0	0	0	0	0
No. of Vehicles Obs.					230	190	173	110	57	80	23	62	4	9	19	53	3	0			
Ave. Speed (m.p.h.)					61.5	57.1	60.7	55.9	63.8	58.7	44.0	47.7	50.75	51.6	42.6	47.0	35.7	—			
Max. Speed (m.p.h.)					—	—	86	81	88	70	—	—	—	60	65	50	43	0			
State or Type					—	—	—	—	OHIO	—	—	—	—	2 S	2 P.U.	2 SILO	252	—			
Min. Speed (m.p.h.)					—	—	30	35	47	46	—	—	—	45	45	26	36	—			
State or Type					—	—	—	—	ILL.	—	—	—	—	2S	2 P.U.	2S200	2 D	—			
No. of Vehicles Obs.					175	190	130	112	45	78	72	60	22	13	50	47	3	0			
Ave. Speed (m.p.h.)					59.8	58.3	58.4	57.1	63.9	60.0	47.8	49.4	49.7	51.7	47.0	48.8	41.3	—			
Max. Speed (m.p.h.)					—	—	74	73	79	77	—	—	—	70	65	56	61	50	0		
Min. Speed (m.p.h.)					—	—	—	—	OHIO	—	—	—	—	2 POP	2 P	2 SILO	252	—			
State or Type					—	—	—	—	46	46	—	—	—	25	42	29	30	31	0		
State or Type					—	—	—	—	OHIO	—	—	—	—	2 POP	2 P.U.	2 DST	2 D	—			

North

South

Station U.S. 52 2.0 Miles North of Templeton

Surface 22' Rock Asphalt

This observation

Date August 29, 1957

Time 9:30 - 11:50 A.M.

Weather Clear, Warm

Month March

Date 1 and 26, 1957

Time 2:30 - 4:30 P.M.

OBSERVATION	Indiana			North-Indiana			All			East			South		
	Last	Present	East	Last	Present	East	Last	Present	East	Last	Present	East	Last	Present	East
No. of Vehicles Obs.	385	369	218	176	167	193	115	133	10	16	105	117	0	0	0
Ave. Speed (m.p.h.)	60.5	55.6	59.7	55.5	61.6	55.8	46.5	46.9	55.9	50.9	45.6	46.4	-	-	-
Min. Speed (m.p.h.)	-	97.0	-	97.2	-	96.9	65.2	70.7	-	87.5	61.9	68.4	-	-	-
Max. Speed (m.p.h.)	94.3	88.6	92.2	88.6	97.0	88.6	30.4	38.3	100.0	87.5	23.8	31.6	-	-	-
No. of Vehicles Obs.	84.2	58.5	80.7	56.3	88.6	60.6	7.0	5.3	60.0	25.0	1.9	2.6	-	-	-
Ave. Speed (m.p.h.)	62.9	26.6	54.6	26.7	73.6	26.4	4.4	0	40.0	0	1.0	0	-	-	-
Min. Speed (m.p.h.)	23.4	6.0	20.2	6.3	27.5	5.7	0	0	0	0	0	0	-	-	-
Max. Speed (m.p.h.)	7.5	2.2	6.9	1.1	8.4	3.1	0	0	0	0	0	0	-	-	-
No. of Vehicles Obs.	1.8	1.1	0.9	0.6	3.0	1.6	0	0	0	0	0	0	-	-	-
Ave. Speed (m.p.h.)	21.2	223	124	117	88	106	48	79	5	13	43	66	-	-	-
Min. Speed (m.p.h.)	60.3	55.9	59.7	55.6	61.1	56.2	45.7	46.3	57.4	52.7	44.3	45.1	-	-	-
Max. Speed (m.p.h.)	-	-	77	75	78	77	-	-	60	58	53.7	55	-	-	-
State or Type	-	-	-	-	Ill	-	-	-	2POP	2P	2510	252	-	-	-
Min. Speed (m.p.h.)	-	-	40	40	40	44	-	-	54	50	32	33	-	-	-
State or Type	-	-	-	-	Ill	-	-	-	2POP	2PU	2DDP	2D	-	-	-
No. of Vehicles Obs.	173	146	94	59	79	87	67	54	5	3	62	51	-	-	-
Ave. Speed (m.p.h.)	60.7	55.3	59.6	55.3	62.1	55.3	47.1	47.8	54.4	43.0	46.5	48.1	-	-	-
Min. Speed (m.p.h.)	-	-	80	70	82	74	-	-	61	51	60	57	-	-	-
State or Type	-	-	-	-	Ill	-	-	-	2POO	2P	2DGO	2SL	-	-	-
Min. Speed (m.p.h.)	-	-	44	43	41	42	-	-	50	36	30	36	-	-	-
State or Type	-	-	-	-	Ill	-	-	-	2POP	2P	2S200	232	-	-	-

West

East

Station U.S. 31 7.2 Miles North of Perrysburg

Surface 22.5% Portland Cement Concrete, Resurfaced with Bituminous Material Weather Clear and Warm

This Observation

Last Previous Observation (Speed Report No.)

Date August 31, 1957

Date March 5 & 12, 1957

Time 9:40 - 11:50

Time

PASSENGER CARS										TRUCKS				BUSES			
All					Indiana		Non-Indiana		all		Less than 5,000 pounds		5,000 pounds or more		all		
OBSERVATION		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles																	
No. of Vehicles Obs.		383	437	309	342	74	95	110	63	37	26	51.4	73	37	6	33.2	0
Ave. Speed (m.p.h.)		53.0	56.8	52.6	56.6	54.8	57.8	43.9	47.1	47.7	51.4	42.0	44.1	44.1	43.2	16.7	-
Min. Speed (m.p.h.)		46.7	49.7	44.5	44.5	46.0	46.0	39.1	39.1	42.2	46.2	37.4	43.2	43.2	16.7	-	-
Max. Speed (m.p.h.)		70.8	87.0	68.9	86.5	78.4	88.4	23.6	30.2	43.8	46.2	11.0	18.9	18.9	16.7	-	-
All Trucks																	
No. of Vehicles Obs.		41.5	65.5	40.1	62.9	47.3	74.7	11.8	14.3	27.0	30.8	4.1	2.7	2.7	16.7	-	-
Ave. Speed (m.p.h.)		19.8	37.5	18.5	35.7	25.7	44.2	6.4	11.1	18.9	23.1	0	2.7	0	0	0	-
Min. Speed (m.p.h.)		7.6	14.4	7.1	14.3	9.5	14.7	1.8	6.3	5.4	15.4	0	0	0	0	0	-
Max. Speed (m.p.h.)		2.6	4.4	2.6	4.4	2.7	4.2	0	1.6	0	3.8	0	0	0	0	0	-
No. of Vehicles Obs.		1.0	0.5	0.6	0.3	2.7	1.1	0	0	0	0	0	0	0	0	0	-
North Bound																	
No. of Vehicles Obs.		200	196	160	163	40	33	60	36	21	14	39	22	39	22	-	-
Ave. Speed (m.p.h.)		53.7	55.8	53.7	55.6	53.8	56.5	43.9	45.6	48.1	48.5	41.6	43.8	41.6	43.8	-	-
Min. Speed (m.p.h.)		75	71	75	71	67	72	68	68	68	66	56	54	56	54	-	-
State or Type		—	—	—	—	Mich.	—	—	—	2POP	2PO	2DDP	2SD	2DDP	2SD	—	—
Min. Speed (m.p.h.)		—	—	31	36	40	40	—	—	24	37	28	33	28	33	—	—
State or Type		—	—	—	—	N.Y.	—	—	—	2POP	2PU	2DST	2D	2DST	2D	—	—
No. of Vehicles Obs.		183	241	149	179	34	62	50	27	16	12	34	15	34	15	-	-
Ave. Speed (m.p.h.)		52.3	57.7	51.4	57.4	56.0	58.5	44.0	49.1	47.2	54.7	42.4	44.5	42.4	44.5	-	-
Min. Speed (m.p.h.)		—	—	74	75	78	78	—	—	69	72	56	62	56	62	-	-
State or Type		—	—	—	—	Mich&Oh	—	—	—	2PCO	2PU	2DDP	2D	2DDP	2D	-	-
Min. Speed (m.p.h.)		—	—	31	33	43	44	—	—	21	42	34	34	34	34	-	-
State or Type		—	—	—	—	Ohio	—	—	—	2PST	2PU	2SDCO	2D	2SDCO	2D	-	-



TABLE

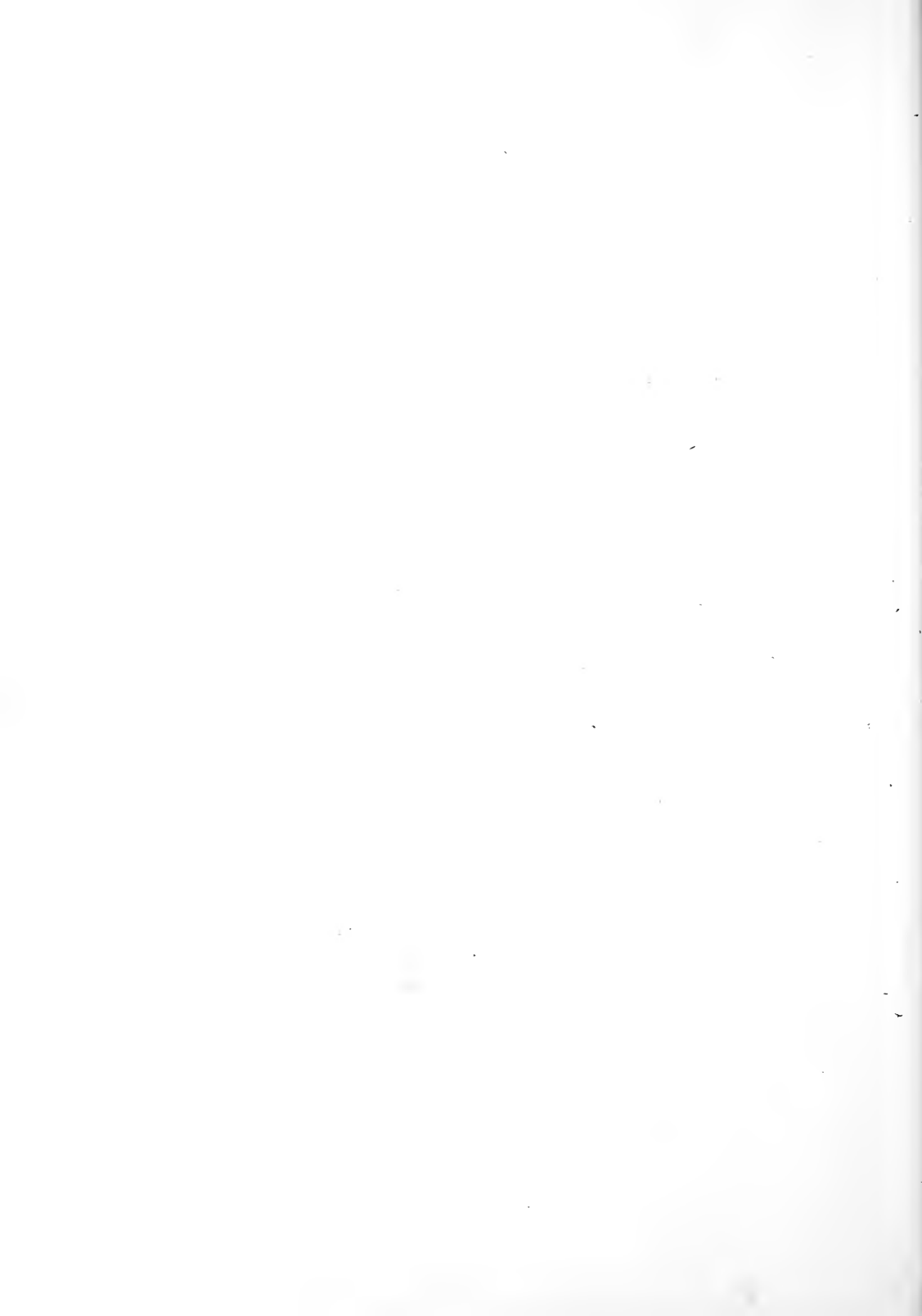
VI

Station S.R. 25 1.0 Miles South Of AmericusSurface 22¹ Bituminous Resurfaced Concrete

This Observation

Date August 28, 1957Time 2:00 - 4:00 P.M.Weather Cloudy - WarmLast Previous Observation (Speed Report No.)Date February 21 & 28, 1957Time -----

	All				Indians				Non-Indians				Less than 500 pounds or more				All
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present			
All Vehicles																	
No. of Vehicles by Ave. Speed	400	416	363	358	37	58	99	86	99	86	31	28	68	58	1	0	
Max. Speed	56.3	55.0	56.0	54.6	59.5	57.6	48.1	48.0	48.1	48.0	50.8	52.5	46.9	45.8	47.0	-	
Ave. Speed	92.8	94.5	92.0	93.9	98.3	98.3	69.7	66.3	69.7	66.3	77.4	82.1	66.2	58.6	100.0	-	
All Vehicles																	
No. of Vehicles by Ave. Speed	80.5	80.8	78.8	79.3	97.3	89.7	38.4	38.4	38.4	38.4	58.8	78.6	30.9	19.0	0	-	
Max. Speed	57.0	52.6	54.3	49.7	83.6	70.7	14.1	19.8	14.1	19.8	29.0	40.4	7.4	6.9	0	-	
Ave. Speed	36.3	28.8	34.2	27.4	56.8	37.9	8.1	8.1	8.1	8.1	16.1	17.9	4.4	3.5	0	-	
All Vehicles																	
No. of Vehicles by Ave. Speed	14.3	6.7	14.1	5.9	16.2	12.1	1.0	1.2	1.0	1.2	3.2	0	0	1.7	0	-	
Max. Speed	5.3	2.9	5.8	2.2	0	6.9	1.0	0	1.0	0	3.2	0	0	0	0	-	
Ave. Speed	2.0	0.5	2.2	0.3	0	1.7	1.0	0	1.0	0	0	0	0	0	0	-	
All Vehicles																	
No. of Vehicles by Ave. Speed	261	251	242	225	19	26	57	55	57	55	16	20	41	35	0	-	
Max. Speed	56.8	55.3	56.5	55.0	59.9	57.6	49.8	49.5	49.8	49.5	53.2	54.0	48.4	47.0	-	-	
Ave. Speed	80	74	80	74	69	80	69	80	69	80	79	64	63	65	-	-	
North																	
No. of Vehicles by Ave. Speed	41	32	49	46	ILL.	-	ILL.	-	ILL.	-	2 P.O.	2 P.U.	2 S.O.	2 D	-	-	
Max. Speed	139	165	121	133	18	32	42	31	42	31	15	8	27	23	1	-	
Ave. Speed	55.5	54.6	54.9	53.9	59.1	57.6	45.8	45.3	45.8	45.3	48.2	49.0	44.5	44.0	47.0	-	
South																	
No. of Vehicles by Ave. Speed	40	39	53	44	ILL.	-	ILL.	-	ILL.	-	2 P.O.	2 P.U.	2 D.O.	2 S2	47.0	-	
Max. Speed	28	30	28	30	2 POP	2 P.U.	2 POP	2 P.U.	2 POP	2 P.U.	2 POP	2 P.U.	2 DDP	2 D	47.0	-	
Ave. Speed	30	32	30	32	2 POP	2 P.U.	2 POP	2 P.U.	2 POP	2 P.U.	2 POP	2 P.U.	2 DDP	2 D	47.0	-	



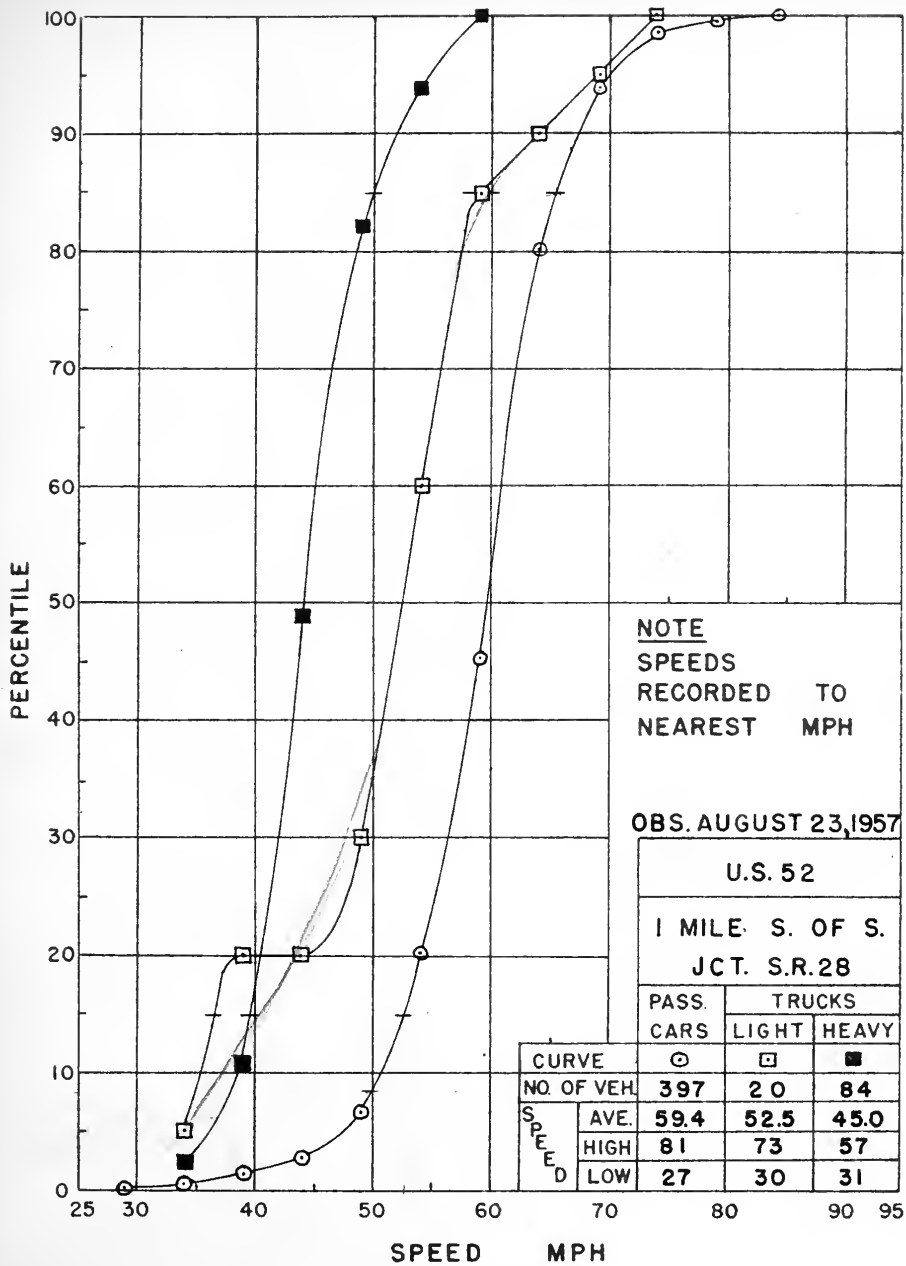


FIGURE 1



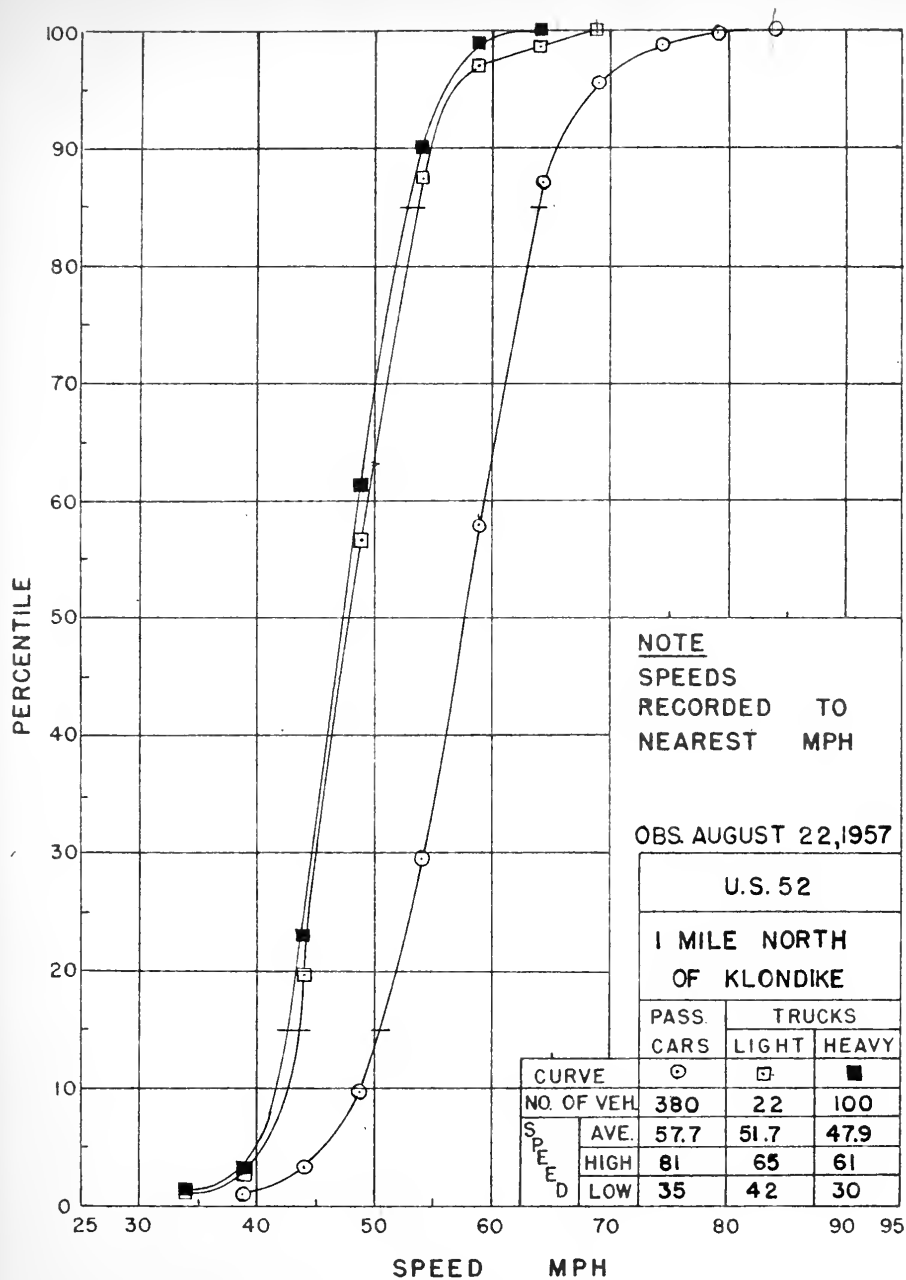
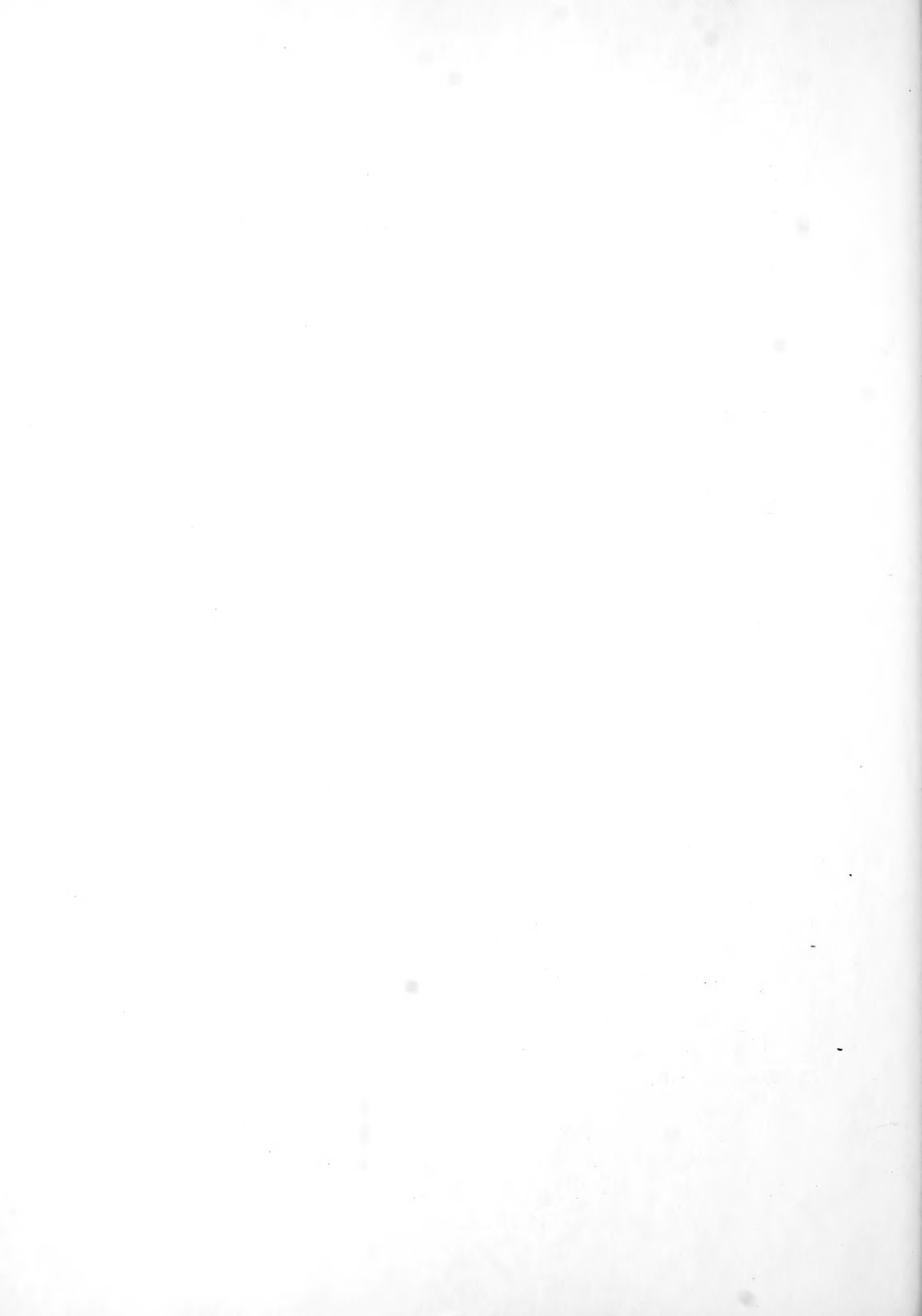


FIGURE 2



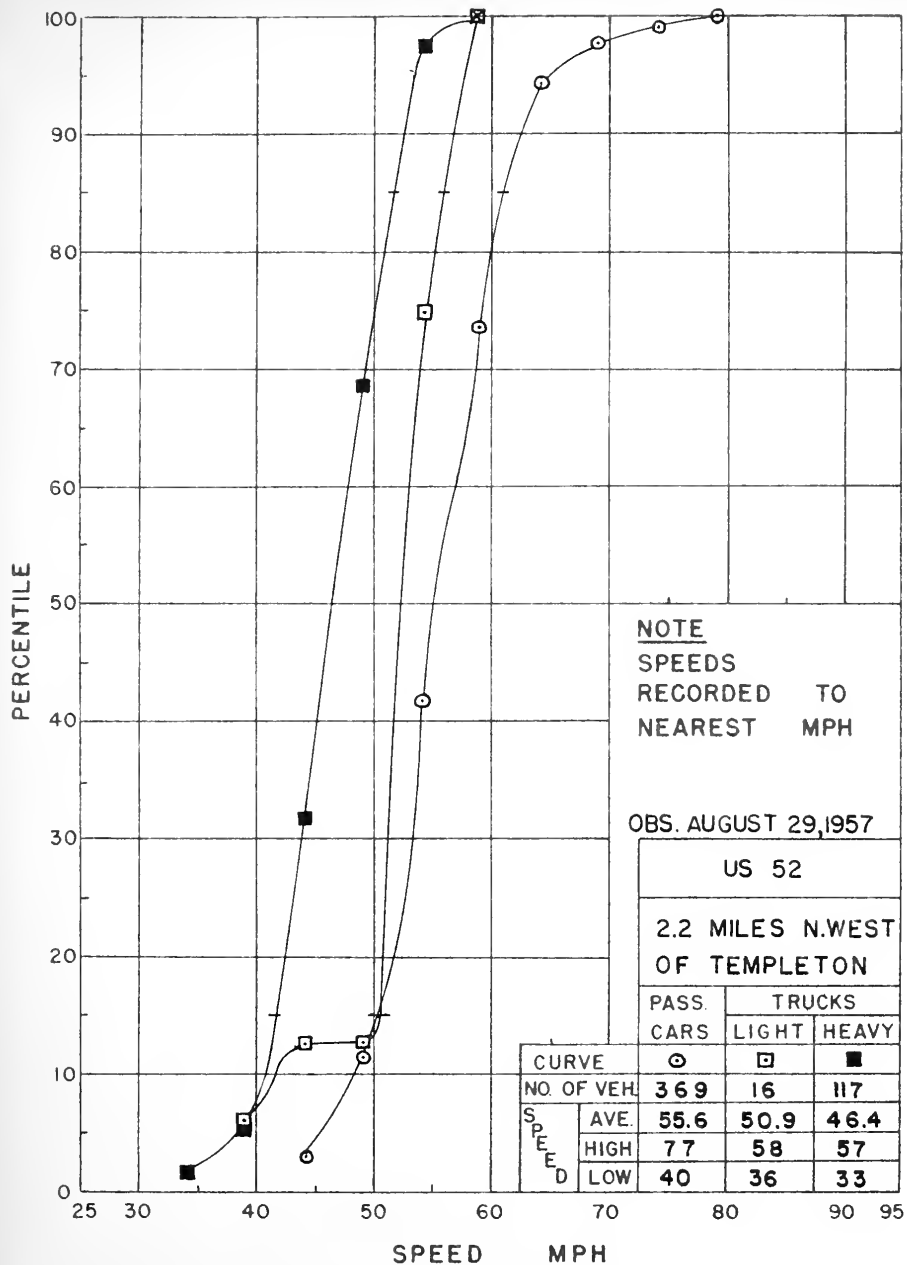


FIGURE 3



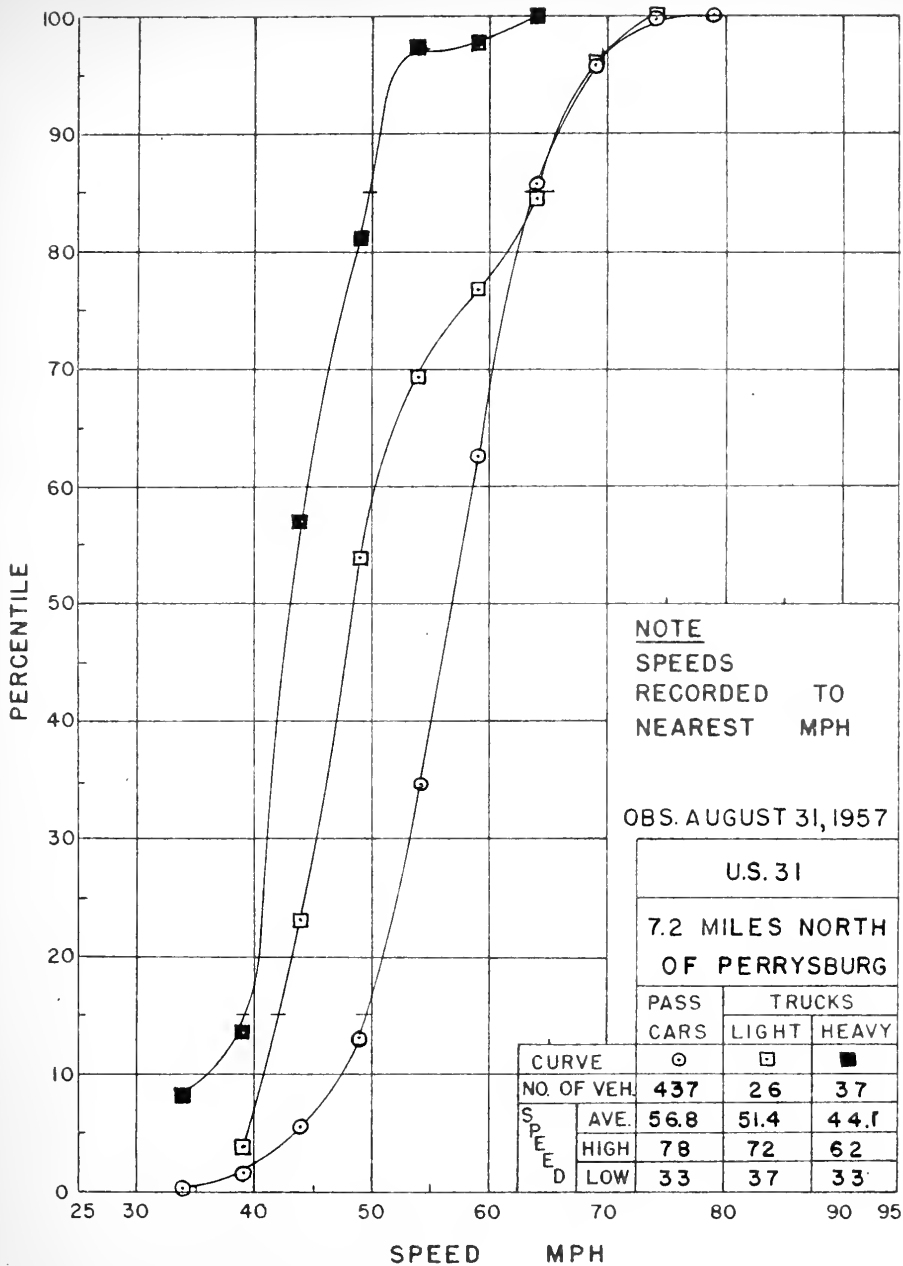


FIGURE 4

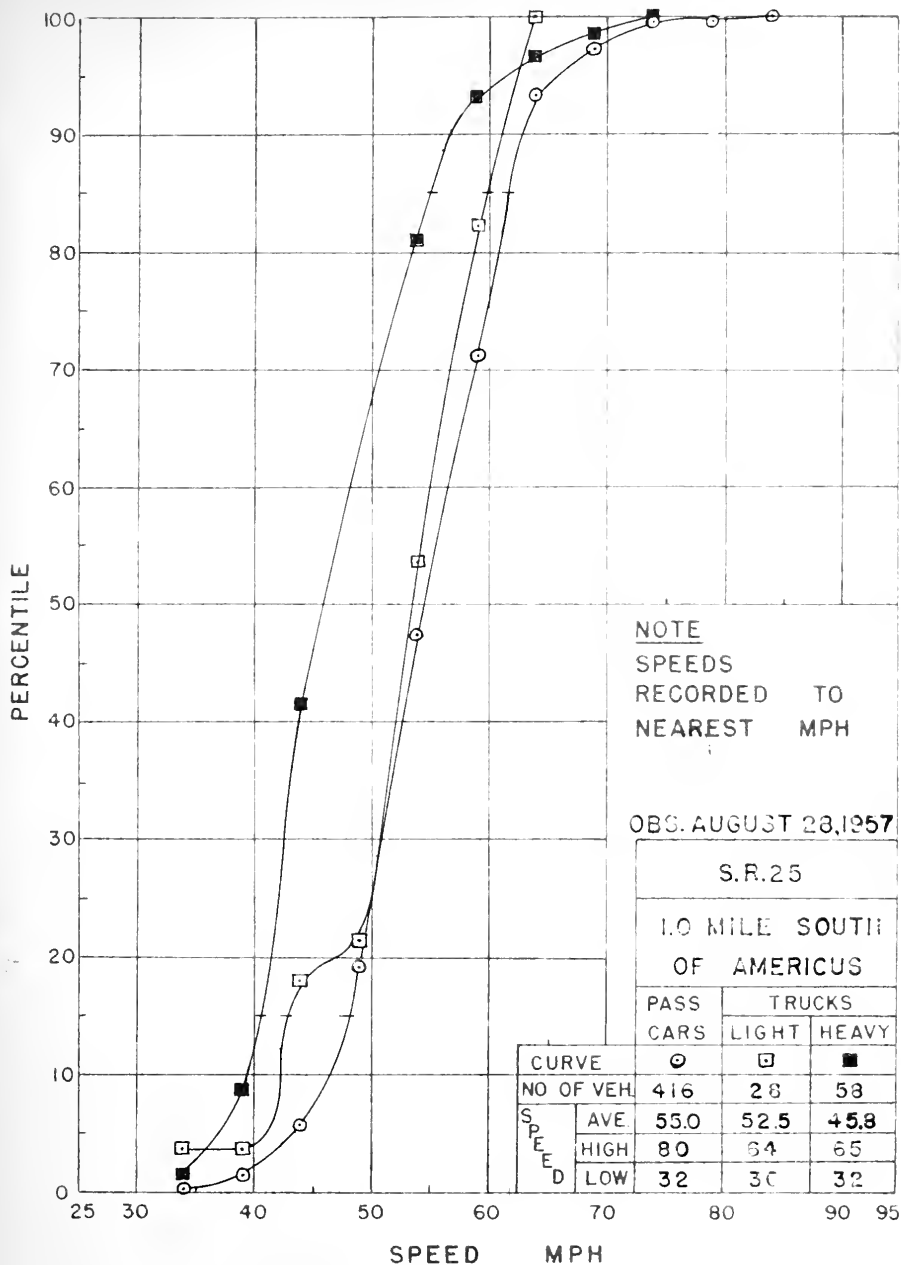


FIGURE 5



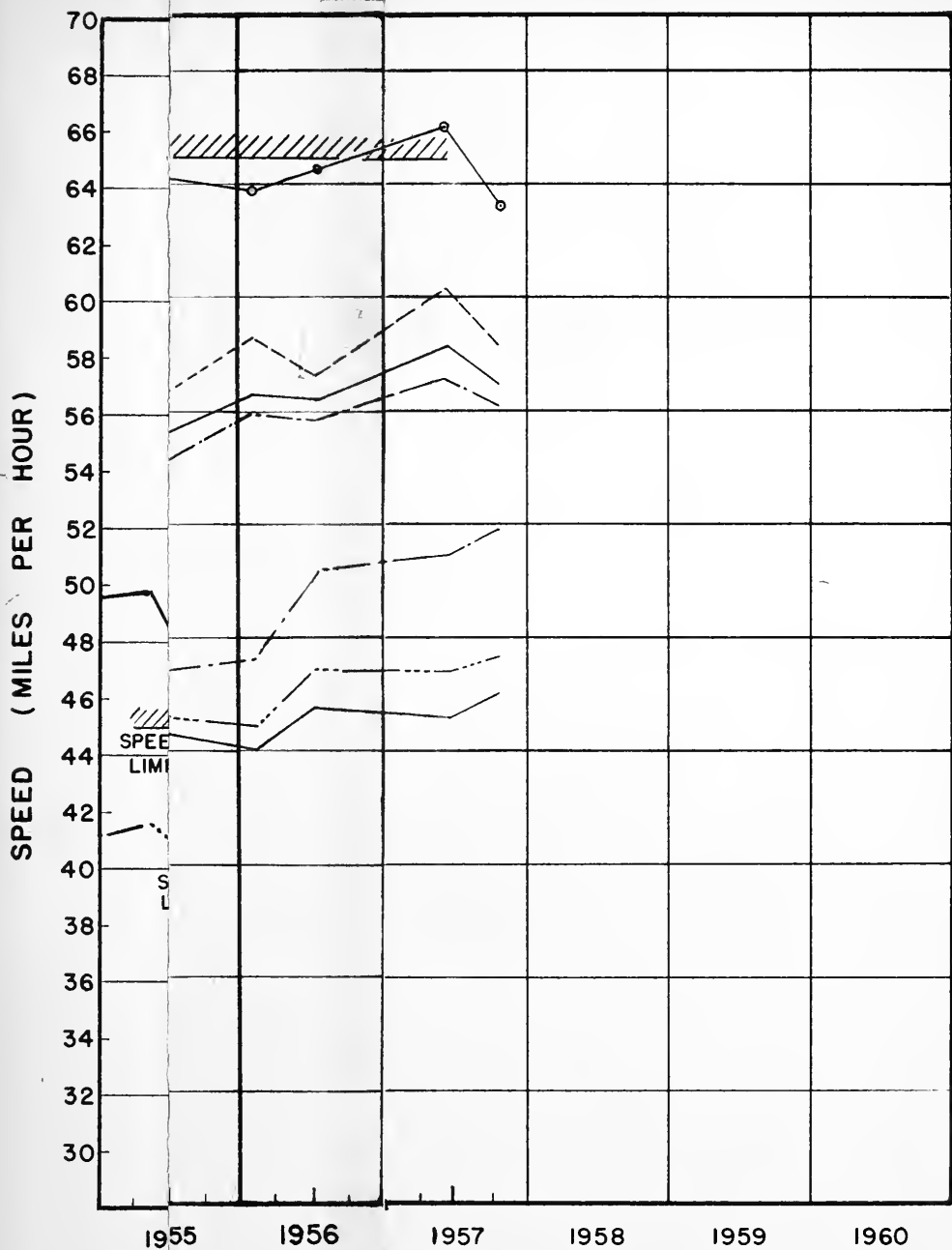


FIG. 6



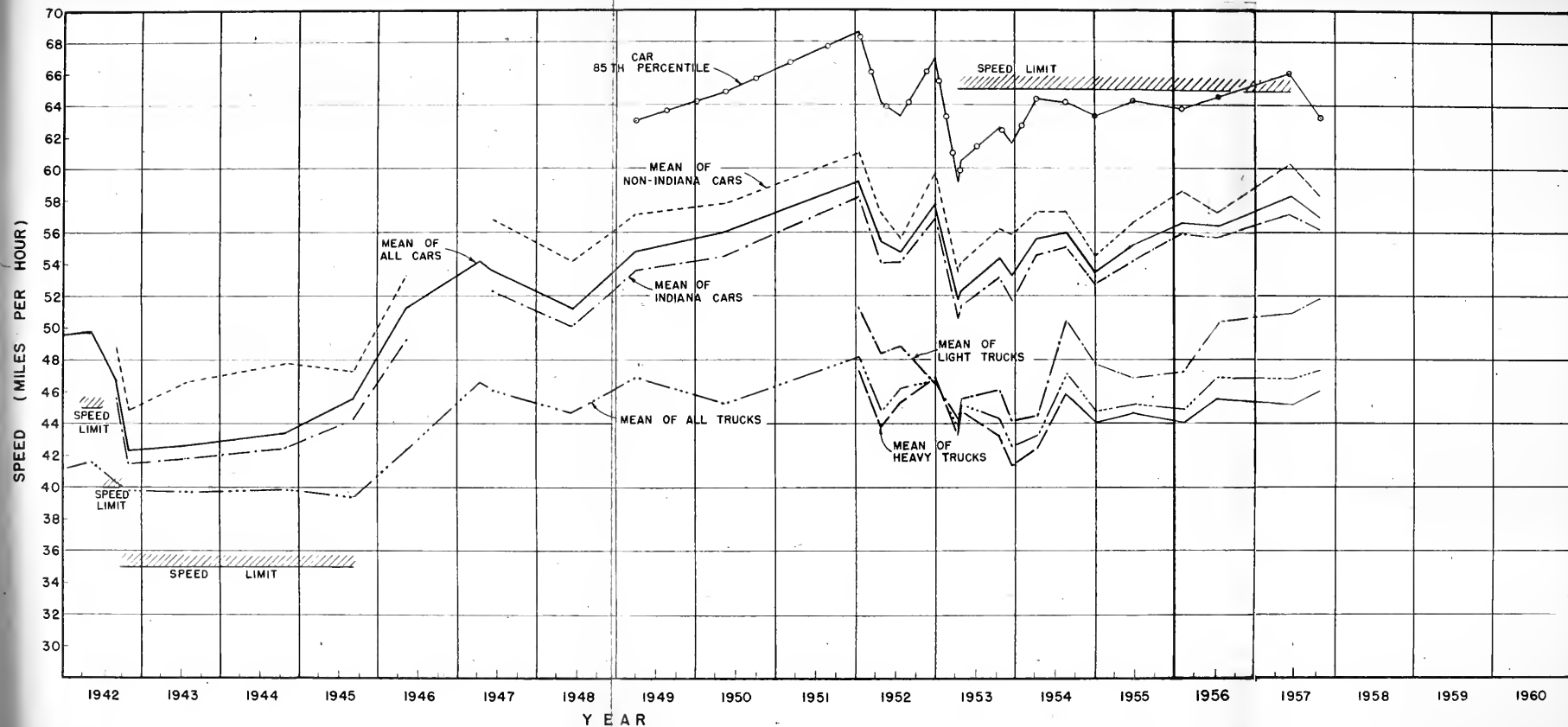


FIG. 6

INDIANA RURAL SPEED TRENDS 1942 - 1960



PERCENTILE SPEED (MILES PER HOUR)

74
72
70
68
66
64
62
60
58
56
54
52
50
48
46
44
42
40
38
36
34
32
30

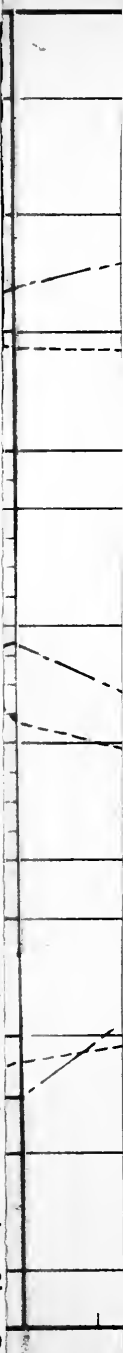


FIG. 7



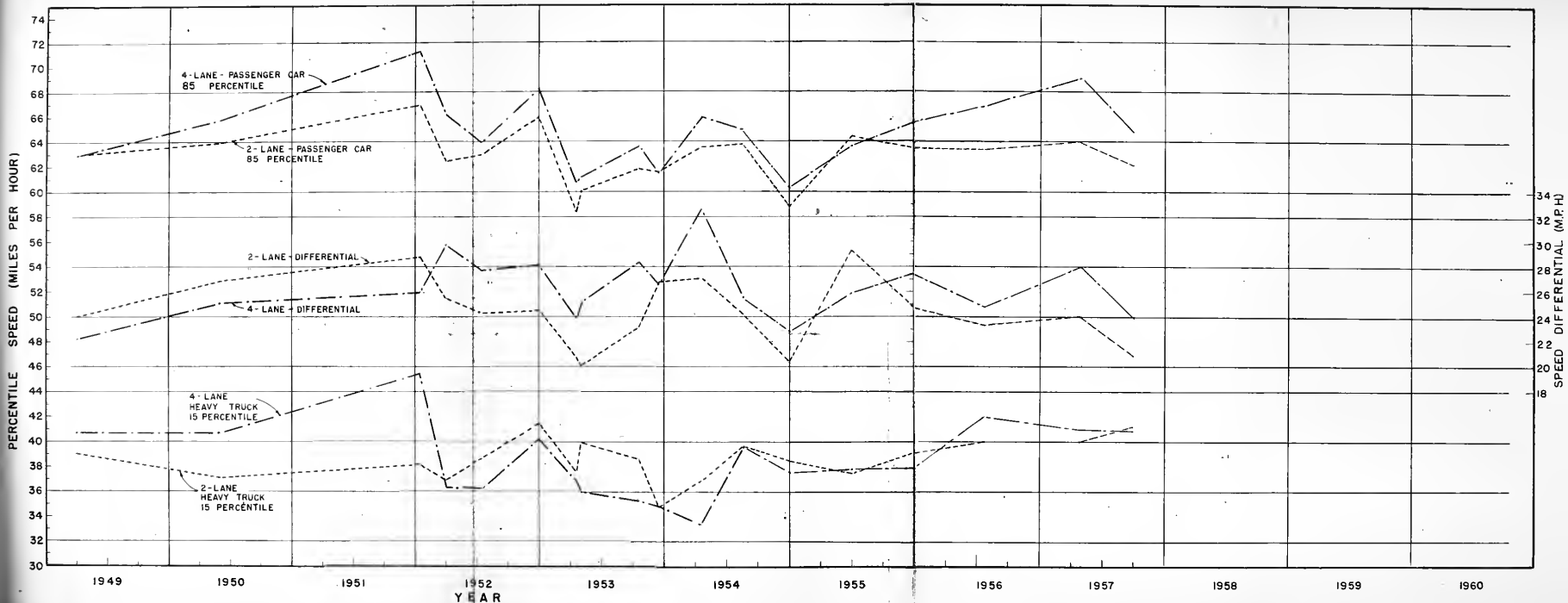


FIG. 7 **TRENDS IN PERCENTILE SPEEDS AND SPEED DIFFERENTIAL 1949-1960**





